UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,525	09/05/2003	Lee B. Barton	oracle01.027	9521

25247   7590   11/27/2007
GORDON E NELSON
PATENT ATTORNEY, PC
57 CENTRAL ST
PO BOX 782
ROWLEY, MA 01969

EXAMINER
MORRISON, JAY A

ART UNIT	PAPER NUMBER
2168	

MAIL DATE	DELIVERY MODE
11/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/656,525
Filing Date: September 05, 2003
Appellant(s): BARTON ET AL.

MAILED

NOV 27 2007

Technology Center 2100

Gordon E. Nelson
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 9/8/2007 appealing from the Office action

mailed 10/18/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly

affect or be directly affected by or have a bearing on the decision in the pending appeal

is contained in the brief.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection

contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is

correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Oracle 9i Database Documentation (Release 2 [9.2], March 2002), Basko et al.

(Patent Number 6,993,529), and Rivlin (Patent Number 6,032,159).

(9) Grounds of Rejection

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 39-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Oracle

9i Database Documentation (Release 2 [9.2], March 2002) ('Oracle' hereinafter).

As per claim 39, <u>Oracle</u> teaches

"obtaining metadata for the object type and using the metadata to make a

determination of the composition of the objects of the type" (metadata views, page B-9,

table B-3, Oracle 9i SQL Reference);

"selecting a transfer technique for objects belonging to the type from a plurality

thereof according to the determination" (SELECT, page 18-4, Oracle 9i SQL

Reference);

"and transferring the objects belonging to the type according to the selected

transfer technique" (SELECT, page 18-4, Oracle 9i SQL Reference).

As per claim 40, <u>Oracle</u> teaches

"in the step of transferring, the objects are transferred in parallel"

(parallel_clause, page 7-49, Oracle 9i SQL Reference).

As per claim 41, <u>Oracle</u> teaches

"receiving a value that specifies a degree of parallelism, the objects being

transferred in parallel as determined by the degree of parallelism" (integer indicates

degree of parallelism, page 7-51, Oracle 9i SQL Reference).

As per claim 42, <u>Oracle</u> teaches

"the transfer technique for certain of the objects permits transfer of portions of the

contents of the object in parallel" (parallel_clause, page 7-49, Oracle 9i SQL

Reference);

"and in the step of transferring the certain objects, the portions are transferred in

parallel" (parallel_clause, page 7-49, Oracle 9i SQL Reference).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

Claims 1,3-15,23-36,43,50-51,53-55,58-65 are rejected under 35 U.S.C. 103(a)

as being unpatentable over <u>Oracle 9i Database Documentation</u> (Release 2 [9.2], March

2002) ('<u>Oracle</u>' hereinafter) in view of <u>Basko et al.</u> ('<u>Basko</u>' hereinafter) (Patent Number

6,993,529).

As per claim 1, <u>Oracle</u> teaches

"a transfer mechanism that transfers database objects" (data transfers, page 2-

40, Oracle-Supplied Types section, Oracle 9i SQL Reference);

"and a ... control database object that represents the job, the transfer mechanism

operating under control of the control database object to transfer the objects in the set"

(CREATE PROCEDURE, page 14-62, Oracle 9i SQL Reference).

<u>Oracle</u> does not explicitly indicate "queryable ... and specifies the set of objects".

However, <u>Basko</u> discloses "queryable ... and specifies the set of objects"

(metadata is stored in tables, column 10, lines 31-59).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine <u>Oracle</u> and <u>Basko</u> because using the steps of

"queryable ... and specifies the set of objects" would have given those skilled in the art

the tools to improve the invention by allowing inquiries into available data sources when

deciding how to implement access. This gives the user the advantage of having

dynamic access and control of resources.

As per claim 3, <u>Oracle</u> teaches

"the control database object further specifies an order in which the transfer mechanism transfers the objects in the set" (ORDER BY, page 18-9, Oracle 9i SQL Reference).

As per claim 4, <u>Oracle</u> teaches

"the order orders the objects in the set" (ORDER BY, page 18-9, Oracle 9i SQL Reference) "by size" (VSIZE, page 6-204, Oracle 9i SQL Reference).

As per claim 5, <u>Oracle</u> teaches

"the control database object includes a filter that further specifies the set of objects" (WHERE, page 18-5, Oracle 9i SQL Reference).

As per claim 6, <u>Oracle</u> teaches

"the transfer mechanism further performs an operation on one or more objects belonging to the set" (page 18-6, Oracle 9i SQL Reference);

"and the control database object includes a specification of the operation" (page 18-6, Oracle 9i SQL Reference).

As per claim 7, <u>Oracle</u> teaches

"the operation is an operation that transforms the object" (examples, page 18-27 through 18-30, Oracle 9i SQL Reference).

As per claim 8, <u>Oracle</u> teaches

"the operation is an operation that remaps a name in the object to a different

name" (expr AS c_alias, page 18-6, Oracle 9i SQL Reference; example SELECT

department_id AS d_e_dept_id, page 18-38, Oracle 9i SQL Reference).

As per claim 9, <u>Oracle</u> teaches

"the control database object includes a specification of a status of the job; and

the transfer mechanism updates the status in the specification during the transfer"

(datafile status, page 2-3, Oracle 9i User-Managed backup and Recovery Guide).

As per claim 10, <u>Oracle</u> teaches

"the control database object is queryable to obtain a current status of the job from

the specification of the status" (query the view, page 2-3, Oracle 9i User-Managed

backup and Recovery Guide).

As per claim 11, <u>Oracle</u> teaches

"the transfer mechanism employs the specification of the status of the job"(query

the view, page 2-3, Oracle 9i User-Managed backup and Recovery Guide) "to restart

the job after the job has been stopped" (resume where it left off, page 4-34, Oracle 9i

User-Managed backup and Recovery Guide).

As per claim 12, <u>Oracle</u> teaches

"the control database object specifies a remote database management system

as a source of the set of objects" (SELECT and external tables, page 17-48, table 17-4,

Oracle 9i SQL Reference);

"and the transfer mechanism fetches the set of objects from the remote database

management system" (external table, SELECT, page 17-48, table 17-4, Oracle 9i SQL

Reference).

As per claim 13, <u>Oracle</u> teaches

"the control database object specifies the database management system as a

destination of the set of database objects" (remote output table, page 17-26, Oracle 9i

SQL Reference);

"and the transfer mechanism further fetches the set of database objects into the

database management system" (SELECT, page 18-4, Oracle 9i SQL Reference).

As per claim 14, <u>Oracle</u> teaches

"the control database object specifies a set of files in the database system as a

source or destination of the set of database objects" (page 17-48, table 17-4, Oracle 9i

SQL Reference).

As per claim 15, <u>Oracle</u> teaches

"when the set of files is the source of the set of database objects, the set of files

is the result of a job and includes a copy of the control database object for the job"

(schema objects, stored procedure, pages 2-107 through 2-108, Oracle 9i SQL

Reference).

As per claim 23, Oracle teaches

"the control database object further specifies a template whereby the transfer

mechanism may add a file to the set of files when required for transferring the objects"

(add a file, page 13-28, SQL Reference).

As per claim 24, Oracle teaches

"the control database object specifies a remote database management system

as a source of the set of objects" (SELECT and external tables, page 17-48, table 17-4,

Oracle 9i SQL Reference) "and a set of files in the database system as a destination

therefor" (DATAFILE specifies datafile or files, pages 15-83 through 15-84, Oracle 9i

SQL Reference);

"and the transfer mechanism transfers the set of objects from the remote

database management system to the set of files" (tablespace, page 9-29, Oracle 9i SQL

Reference).

As per claim 25, Oracle teaches

"the control database object specifies a set of files in the database system as a

source of the set of objects" (datafile, page 9-29, Oracle 9i SQL Reference);

"and the transfer mechanism transfers the set of objects from the set of files into the database management system" (tablespace, page 9-29, Oracle 9i SQL Reference).

As per claim 26, <u>Oracle</u> teaches

"the transfer mechanism further provides an interface whereby an entity that uses the transfer mechanism may interact with the job" (SQL*Plus SQL prompt, page 2-2, Oracle 9i User-Managed Backup and Recovery Guide).

As per claim 27, <u>Oracle</u> teaches

"the interface permits the entity to attach to and detach from the job for as long as the job's control database object exists, transfer of the objects by the transfer mechanism being unaffected by detachment of the entity from the job" (SQL*Plus SQL prompt, page 2-2, Oracle 9i User-Managed Backup and Recovery Guide).

As per claim 28, <u>Oracle</u> teaches

"the entity may use the interface via a network connection to the database management system" (access the remote database, first paragraph, page 2-120, Oracle 9i SQL Reference).

As per claim 29, <u>Oracle</u> teaches

"the interface includes a defining interface whereby the entity may define a portion of the job's control database object" (SQL*Plus SQL prompt, page 2-2, Oracle 9i User-Managed Backup and Recovery Guide).

As per claim 30, <u>Oracle</u> teaches

"the interface includes an executing interface whereby the entity may interact with the transfer mechanism from the time the transfer mechanism begins transferring the objects in the set until the job's control database object ceases to exist" (SQL*Plus SQL prompt, page 2-2, Oracle 9i User-Managed Backup and Recovery Guide).

As per claim 31, <u>Oracle</u> teaches

"the entity may use the executing interface to obtain a current status of the job from a specification of the status of the job in the control database object" (page 2-3, Determining Datafile Status for Online Tablespace Backups section, Oracle 9i User-Managed Backup and Recovery Guide).

As per claim 32, <u>Oracle</u> teaches

"the entity may use the executing interface to stop performance of the job by the transfer mechanism or the transfer mechanism may stop performance of the job in response to an error" (interactively stop, page 1-14, second paragraph, Oracle 9i Backup and Recovery Concepts).

As per claim 33, <u>Oracle</u> teaches

"the entity may use the executing interface to restart a stopped job, the transfer

mechanism using a specification of the status of the job in the control database object to

restart the job" (interactively start or stop, page 1-14, second paragraph, Oracle 9i

Backup and Recovery Concepts).

As per claim 34, <u>Oracle</u> teaches

"the entity may use the executing interface to affect allocation of resources by the

transfer mechanism to the job" (threads parameter, page 3-8, Oracle 9i, SQL*Plus

Users Guide and Reference).

As per claim 35, <u>Oracle</u> teaches

"the transfer mechanism operates on objects in the set in parallel"

(parallel_clause, page 7-49, Oracle 9i SQL Reference);

"and the entity uses the executing interface to specify a maximum degree of

parallelism for the job" (integer indicates degree of parallelism, page 7-51, Oracle 9i

SQL Reference).

As per claim 36, <u>Oracle</u> teaches

"at least one file containing the objects belonging to the set thereof" (external

table, page 15-8, Oracle 9i SQL Reference);

Oracle does not explicitly indicate "and a control object in the set thereof that specifies for each object belonging to the set the location of the object in the set of files and an order in which the database management system transfers the object during the transfer".

However, Basko discloses "and a control object in the set thereof that specifies for each object belonging to the set the location of the object in the set of files and an order in which the database management system transfers the object during the transfer" (metadata is stored in tables, column 10, lines 31-59; data flow diagram imports order in which objects are transferred, column 6, lines 31-51).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Oracle and Basko because using the steps of "and a control object in the set thereof that specifies for each object belonging to the set the location of the object in the set of files and an order in which the database management system transfers the object during the transfer" would have given those skilled in the art the tools to improve the invention by allowing inquiries into available data sources when deciding how to implement access. This gives the user the advantage of having dynamic access and control of resources.

As per claim 43, Oracle teaches

"and executing the job by causing the transfer mechanism to transfer the set of database objects under control of the job's control data base object" (data transfers, page 2-40, Oracle-Supplied Types section, Oracle 9i SQL Reference).

Oracle does not explicitly indicate "defining a queryable control database object that represents the job and specifies the set of objects".

However, Basko discloses "defining a queryable control database object that represents the job and specifies the set of objects" (metadata is stored in tables, column 10, lines 31-59).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Oracle and Basko because using the steps of "defining a queryable control database object that represents the job and specifies the set of objects" would have given those skilled in the art the tools to improve the invention by allowing inquiries into available data sources when deciding how to implement access. This gives the user the advantage of having dynamic access and control of resources.

As per claim 50, Oracle teaches

"the step of defining the job includes the step of creating the job's control database object" (CREATE PROCEDURE, page 14-62, Oracle 9i SQL Reference).

As per claim 51, Oracle teaches

"the step of defining the job includes the step of specifying a source and/or destination for the set of database objects in the job's control database object" (FROM, page 18-5, Oracle 9i SQL Reference).

As per claim 53, Oracle teaches

"the step of defining the job includes the step of specifying a filter in the job's

control database object, the filter defining a subset of the specified set of database

objects as the set of objects to be transferred in the job" (WHERE, page 18-5, Oracle 9i

SQL Reference).

As per claim 54, Oracle teaches

"the step of defining the job includes the step of specifying an operation in the

job's control database object that is to be performed on one or more objects in the set"

(SELECT, page 18-5, Oracle 9i SQL Reference).

As per claim 55, Oracle teaches

"the step of defining the job includes the step of defining a parameter for the job

in the job's control database object for the job" (examples, page 18-27 through 18-30,

Oracle 9i SQL Reference).

As per claim 58, Oracle teaches

"the control database object includes a specification of one or more parameters

for the job; the transfer mechanism transferring the objects in the set as specified by the

parameter" (page 18-27 through 18-30, Oracle 9i SQL Reference).

As per claim 59,

Oracle does not explicitly indicate "the parameter is an estimate only parameter, the transfer mechanism responding thereto by providing an estimate of the space required for the objects in the set without transferring the objects".

However, Basko discloses "the parameter is an estimate only parameter, the transfer mechanism responding thereto by providing an estimate of the space required for the objects in the set without transferring the objects" (column 9, lines 5-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Oracle and Basko because using the steps of "the parameter is an estimate only parameter, the transfer mechanism responding thereto by providing an estimate of the space required for the objects in the set without transferring the objects" would have given those skilled in the art the tools to improve the invention by allowing space requirements to be checked before a transfer. This gives the user the advantage of not starting a transfer that cannot complete.

As per claim 60,

Oracle does not explicitly indicate "the control database object is a table and includes rows representing the objects belonging to the set of database objects".

However, Basko discloses "the control database object is a table and includes rows representing the objects belonging to the set of database objects" (column 10, lines 31-58).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Oracle and Basko because using the steps of "the

control database object is a table and includes rows representing the objects belonging

to the set of database objects" would have given those skilled in the art the tools to

improve the invention by having an object which is easily stored in the database format.

This gives the user the advantage of having a standardized format.

As per claim 61,

Oracle does not explicitly indicate "the row representing a particular object

includes a field whose value specifies an order in which the object is to be transferred

relative to the other objects".

However, Basko discloses "the row representing a particular object includes a

field whose value specifies an order in which the object is to be transferred relative to

the other objects" (column 10, lines 31-58).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine Oracle and Basko because using the steps of "the row

representing a particular object includes a field whose value specifies an order in which

the object is to be transferred relative to the other objects" would have given those

skilled in the art the tools to improve the invention by allowing a more detailed timeline

of transfers to be developed. This gives the user the advantage of being sure that object

relationships are not altered.

As per claim 62,

Oracle does not explicitly indicate "the data storage device contains code which, when executed by a processor, implements the apparatus set forth in claim 1".

However, Basko discloses "the data storage device contains code which, when executed by a processor, implements the apparatus set forth in claim 1" (column 3, line 60 through column 4, line 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Oracle and Basko because using the steps of "the data storage device contains code which, when executed by a processor, implements the apparatus set forth in claim 1" would have given those skilled in the art the tools to improve the invention by allowing the program to be stored for future use. This gives the user the advantage of having a non-volatile copy of the resource.

As per claim 63,

Oracle does not explicitly indicate "the data storage device contains the set of files set forth in claim 36".

However, Basko discloses "the data storage device contains the set of files set forth in claim 36" (column 6, lines 20-30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Oracle and Basko because using the steps of "the data storage device contains the set of files set forth in claim 36" would have given those skilled in the art the tools to improve the invention by allowing the program to be stored

for future use. This gives the user the advantage of having a non-volatile copy of the

resource.

As per claim 64,

Oracle does not explicitly indicate "the data storage device contains code which,

when executed by a processor, implements the method set forth in claim 39"

However, Basko discloses "the data storage device contains code which, when

executed by a processor, implements the method set forth in claim 39". (column 3, line

60 through column 4, line 3).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine Oracle and Basko because using the steps of "the data

storage device contains code which, when executed by a processor, implements the

method set forth in claim 39" would have given those skilled in the art the tools to

improve the invention by allowing the program to be stored for future use. This gives the

user the advantage of having a non-volatile copy of the resource.

As per claim 65,

Oracle does not explicitly indicate "the data storage device contains code which,

when executed by a processor, implements the method set forth in claim 43"

However, Basko discloses "the data storage device contains code which, when

executed by a processor, implements the method set forth in claim 43". (column 3, line

60 through column 4, line 3).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine Oracle and Basko because using the steps of "the data

storage device contains code which, when executed by a processor, implements the

method set forth in claim 43" would have given those skilled in the art the tools to

improve the invention by allowing the program to be stored for future use. This gives the

user the advantage of having a non-volatile copy of the resource.

Claims 16-22,37-38,44-49,56-57 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Oracle 9i Database Documentation (Release 2 [9.2], March 2002)

('Oracle' hereinafter) in view of Basko et al. ('Basko' hereinafter) (Patent Number

6,993,529) and further in view of Rivlin (Patent Number 6,032,159).

As per claim 16,

Oracle does not explicitly indicate "the control database object is a table and

includes rows representing objects belonging to the set of database objects".

However, Rivlin discloses "the control database object is a table and includes

rows representing objects belonging to the set of objects" (column 6, line 55 through

column 7, line 10).

It would have been obvious to one of ordinary skill in the art to combine Oracle,

Basko, and Rivlin because using the steps of "the control database object is a table and

includes rows representing objects belonging to the set of objects" would have given

those skilled in the art the tools to obtain speed benefits over previous methods. This

gives the user the advantage of being able to copy specific objects in a set.

As per claim 17,

Oracle does not explicitly indicate "each row representing an object belonging to

the set includes a specification of an order in which the object represented by the row

was transferred to the set of files relative to other objects belonging to the set".

However, Rivlin discloses "each row representing an object belonging to the set

includes a specification of an order in which the object represented by the row was

transferred to the set of files relative to other objects belonging to the set" (column 6,

line 55 through column 7, line 10).

It would have been obvious to one of ordinary skill in the art to combine Oracle,

Basko, and Rivlin because using the steps of "each row representing an object

belonging to the set includes a specification of an order in which the object represented

by the row was transferred to the set of files relative to other objects belonging to the

set" would have given those skilled in the art the tools to obtain speed benefits over

previous methods. This gives the user the advantage of being able to copy specific

objects in a set.

As per claim 18,

Oracle does not explicitly indicate "when the set of files is the destination of the set of database objects, there is a row representing each object that has been transferred to the set of files".

However, Rivlin discloses "when the set of files is the destination of the set of database objects, there is a row representing each object that has been transferred to the set of files" (column 6, line 55 through column 7, line 10).

It would have been obvious to one of ordinary skill in the art to combine Oracle, Basko, and Rivlin because using the steps of "when the set of files is the destination of the set of database objects, there is a row representing each object that has been transferred to the set of files" would have given those skilled in the art the tools to obtain speed benefits over previous methods. This gives the user the advantage of being able to copy specific objects in a set.

As per claim 19,

Oracle does not explicitly indicate "when the set of files is the source of the set of database objects, there is a row representing each object which is to be transferred into the database management system".

However, Rivlin discloses "when the set of files is the source of the set of database objects, there is a row representing each object which is to be transferred into the database management system" (column 6, line 55 through column 7, line 10).

It would have been obvious to one of ordinary skill in the art to combine Oracle, Basko, and Rivlin because using the steps of "when the set of files is the source of the

set of database objects, there is a row representing each object which is to be

transferred into the database management system" would have given those skilled in

the art the tools to obtain speed benefits over previous methods. This gives the user the

advantage of being able to copy specific objects in a set.

As per claim 20,

Oracle does not explicitly indicate "the row representing a particular object

includes a field whose value specifies an order in which the object is to be transferred

relative to the other objects".

However, Rivlin discloses "the row representing a particular object includes a

field whose value specifies an order in which the object is to be transferred relative to

the other objects" (column 6, line 55 through column 7, line 10).

It would have been obvious to one of ordinary skill in the art to combine Oracle,

Basko, and Rivlin because using the steps of "the row representing a particular object

includes a field whose value specifies an order in which the object is to be transferred

relative to the other objects" would have given those skilled in the art the tools to obtain

speed benefits over previous methods. This gives the user the advantage of being able

to copy specific objects in a set.

As per claim 21,

Oracle does not explicitly indicate "the set of files is the result of a job and

includes a copy of the control database object for the job, the copy having a row for

each database object contained in the set of files; and when the transfer mechanism is transferring the objects belonging to the set of objects from the set of files into the database management system, the control database object contains a copy of at least the rows representing the objects from the copy of the control database object in the file set".

However, Rivlin discloses "the set of files is the result of a job and includes a copy of the control database object for the job, the copy having a row for each database object contained in the set of files; and when the transfer mechanism is transferring the objects belonging to the set of objects from the set of files into the database management system, the control database object contains a copy of at least the rows representing the objects from the copy of the control database object in the file set" (column 6, line 55 through column 7, line 10).

It would have been obvious to one of ordinary skill in the art to combine Oracle, Basko, and Rivlin because using the steps of "the set of files is the result of a job and includes a copy of the control database object for the job, the copy having a row for each database object contained in the set of files; and when the transfer mechanism is transferring the objects belonging to the set of objects from the set of files into the database management system, the control database object contains a copy of at least the rows representing the objects from the copy of the control database object in the file set" would have given those skilled in the art the tools to obtain speed benefits over previous methods. This gives the user the advantage of being able to copy specific objects in a set.

As per claim 22,

Oracle does not explicitly indicate "the row in the copied rows representing a particular object includes a field whose value specifies an order in which the object is to be transferred relative to the other objects represented by the copied rows".

However, Rivlin discloses "the row in the copied rows representing a particular object includes a field whose value specifies an order in which the object is to be transferred relative to the other objects represented by the copied rows" (column 6, line 55 through column 7, line 10).

It would have been obvious to one of ordinary skill in the art to combine Oracle, Basko, and Rivlin because using the steps of "the row in the copied rows representing a particular object includes a field whose value specifies an order in which the object is to be transferred relative to the other objects represented by the copied rows" would have given those skilled in the art the tools to obtain speed benefits over previous methods. This gives the user the advantage of being able to copy specific objects in a set.

As per claim 37,

Oracle does not explicitly indicate "the file further includes metadata that defines a type of database objects and one or more database objects that belong to the type defined by the metadata and the order determines that the metadata is processed before the database objects that belong to the type defined by the metadata".

However, Rivlin discloses "the file further includes metadata that defines a type

of database objects and one or more database objects that belong to the type defined

by the metadata; and the order determines that the metadata is processed before the

database objects that belong to the type defined by the metadata" (column 3, lines 9-

42).

It would have been obvious to one of ordinary skill in the art to combine Oracle,

Basko, and Rivlin because using the steps of "the file further includes metadata that

defines a type of database objects and one or more database objects that belong to the

type defined by the metadata; and the order determines that the metadata is processed

before the database objects that belong to the type defined by the metadata" would

have given those skilled in the art the tools to obtain speed benefits over previous

methods. This gives the user the advantage of being able to copy specific objects in a

set.

As per claim 38, Oracle teaches

"a header in each file of the set, the header including an indication the control

object is contained in the file and if so, the location of the control object in the file and an

identifier that identifies the file within the set" (page 7-8 and 7-9, Crosschecks of RMAN

Backups and Copies section, Oracle 9i Recovery manager user's Guide);

"and the control object uses the identifier in specifying the location of the object in

the set of files" (page 7-8 and 7-9, Crosschecks of RMAN Backups and Copies section,

Oracle 9i Recovery Manager User's Guide).

As per claim 44,

Oracle does not explicitly indicate "the step performed in either the defining step or the executing step of: attaching to the job, attachment permitting at least reading and/or modification of the job's control database object".

However, Rivlin discloses "the step performed in either the defining step or the executing step of: attaching to the job, attachment permitting at least reading and/or modification of the job's control database object" (column 7, lines 25-58).

It would have been obvious to one of ordinary skill in the art to combine Oracle, Basko, and Rivlin because using the steps of "the step performed in either the defining step or the executing step of: attaching to the job, attachment permitting at least reading and/or modification of the job's control database object" would have given those skilled in the art the tools to provide recoverable and consistent data in the case of a system failure. This gives the user the advantage of not risking losing time and data.

As per claim 45,

Oracle does not explicitly indicate "the step performed after the step of attaching to the job of: reading the job's control database object to get the job's current status".

However, Rivlin discloses "the step performed after the step of attaching to the job of: reading the job's control database object to get the job's current status" (column 7, lines 25-58).

It would have been obvious to one of ordinary skill in the art to combine <u>Oracle</u>,

<u>Basko</u>, and <u>Rivlin</u> because using the steps of "the step performed after the step of

attaching to the job of: reading the job's control database object to get the job's current

status" would have given those skilled in the art the tools to provide recoverable and

consistent data in the case of a system failure. This gives the user the advantage of not

risking losing time and data.

As per claim 46, <u>Oracle</u> discloses

"the transfer mechanism transfers the data objects in parallel and the method

further comprises the step performed after the step of attaching to the job of: specifying

a degree of parallelism with which the objects may be transferred" (page 7-49 through

7-51, Oracle 9i SQL Reference).

As per claim 47,

<u>Oracle</u> does not explicitly indicate "the step performed after the step of attaching

to the job of: starting the step of executing the job".

However, <u>Rivlin</u> discloses "the step performed after the step of attaching to the

job of: starting the step of executing the job" (column 7, lines 25-58).

It would have been obvious to one of ordinary skill in the art to combine <u>Oracle</u>,

<u>Basko</u>, and <u>Rivlin</u> because using the steps of "the step performed after the step of

attaching to the job of: starting the step of executing the job" would have given those

skilled in the art the tools to provide recoverable and consistent data in the case of a

system failure. This gives the user the advantage of not risking losing time and data.

As per claim 48, <u>Oracle</u> teaches

"the step performed after attaching to the job of: stopping the step of executing

the job" (recovery CANCEL, page 4-18 through 4-19, Oracle 9i User-Managed backup

and Recovery Guide).

As per claim 49,

<u>Oracle</u> does not explicitly indicate "saving job state in the control database object

such that the step of executing the job may be restarted from the job state".

However, <u>Rivlin</u> discloses "saving job state in the control database object such

that the step of executing the job may be restarted from the job state" (column 7, lines

25-58).

It would have been obvious to one of ordinary skill in the art to combine <u>Oracle</u>,

<u>Basko</u>, and <u>Rivlin</u> because using the steps of "saving job state in the control database

object such that the step of executing the job may be restarted from the job state" would

have given those skilled in the art the tools to provide recoverable and consistent data

in the case of a system failure. This gives the user the advantage of not risking losing

time and data.

As per claim 56,

Oracle does not explicitly indicate "the step of executing the job includes the step

performed when the step of executing the job must be stopped of: saving job state in

the control database object such that the stopped executing step may be restarted from

the job state".

However, Rivlin discloses "the step of executing the job includes the step

performed when the step of executing the job must be stopped of: saving job state in

the control database object such that the stopped executing step may be restarted from

the job state" (column 7, lines 25-58).

It would have been obvious to one of ordinary skill in the art to combine Oracle,

Basko, and Rivlin because using the steps of "the step of executing the job includes the

step performed when the step of executing the job must be stopped of: saving job state

in the control database object such that the stopped executing step may be restarted

from the job state" would have given those skilled in the art the tools to provide

recoverable and consistent data in the case of a system failure. This gives the user the

advantage of not risking losing time and data.

As per claim 57,

Oracle does not explicitly indicate "the step of executing the job includes the step

performed when the step of executing the job has been stopped of: using the job state

to restart the stopped executing step".

However, <u>Rivlin</u> discloses "the step of executing the job includes the step performed when the step of executing the job has been stopped of: using the job state to restart the stopped executing step" (column 7, lines 25-58).

It would have been obvious to one of ordinary skill in the art to combine <u>Oracle</u>, <u>Basko</u>, and <u>Rivlin</u> because using the steps of "the step of executing the job includes the step performed when the step of executing the job has been stopped of: using the job state to restart the stopped executing step" would have given those skilled in the art the tools to provide recoverable and consistent data in the case of a system failure. This gives the user the advantage of not risking losing time and data.

(10) Response to Argument

With respect to the outstanding 35 U.S.C. 103(a) rejections relating to claims 1 and 43, Applicant argues that <u>Oracle</u> does not disclose "queryable control database object", it is respectfully submitted that the rejection of claim 1 does not state that the <u>Oracle</u> reference teaches the "queryable" element of the claim. With regards to the "control database object", the Applicant states that the list of database objects at page 2-102 of the <u>Oracle</u> SQL Reference does not contain an SQL statement. In fact, stored procedures are contained in the list (found on pages 2-107 through 2-108), which is the object which is created via the CREATE PROCEDURE function.

Further, Applicant admits that <u>Basko's</u> aggregation metadata are "queryable" and

do represent a job, which shows that when combined with the <u>Oracle</u> reference the

"queryable control database object" which represents a job. Applicant further argues

that <u>Basko</u> does not teach a job which "transfers a set of database objects into or out of

the database management system", however <u>Basko</u> is not used to teach this element.

In fact, the <u>Oracle</u> SQL Reference is used to teach this element as shown on page 2-40:

> "Oracle automatically provides the low-level infrastructure services needed for
> input-output, heterogeneous client-side access for new datatypes, and
> optimizations for data transfers between the application and the database".

From this citation it is clear that data transfers occur between the application and the

database, or into and out of the database management system as claimed. A stored

procedure is an object specifically defined so that it can be called from an application

and returns objects contained within in the database management system back to the

calling application. It is therefore respectfully submitted that the claim has in fact been

taught by the combined references.

With respect to arguments regarding claims 3 and 4, Applicant argues that

<u>Oracle</u> does not teach that the control database object specifies an order in which the

transfer mechanism transfers the objects in the set. Further, the Applicant argues that

the ORDER BY clause are not database objects. Respectfully, these constructs, along

with SELECT statements, are the constructs from which the Stored Procedures (from

claim 1) are constructed. Since these Procedures can contain the ORDER BY clause,

which define the order which objects are placed into a set, therefore the order which the

transfer mechanism transfers the objects in the set would follow based on the

mechanism of the Stored Procedure in replying to application calls to the database.

Therefore it is clear that the <u>Oracle</u> reference teaches these claims.

With respect to Applicant's arguments regarding claim 5, the <u>Oracle</u> reference

teaches this limitation in the same manner as it teaches claims 3 and 4. The WHERE

clause is a filter used in returning results from within a Stored Procedure, in which

WHERE specifies the specific patterns to include in results sets SELECTed from

database objects. Therefore it is clear that <u>Oracle</u> also teaches this claim.

With respect to Applicant's arguments regarding claims 6-8 and 53-55, the same

logic as applied to claims 3-5, above, regarding how the <u>Oracle</u> reference teaches these

claims can be applied; these constructs are the building blocks from which Stored

Procedures are constructed. Therefore <u>Oracle</u> also teaches these claims.

With respect to Applicant's arguments regarding claims 9-11, the argument is

that the <u>Oracle</u> reference do not teach the previously taught limitations (taught as shown

in claim 1 above) where the limitations regarding transfer of a set of database objects

into and out of the database system. Therefore <u>Oracle</u> teaches these claims.

With respect to arguments regarding claims 12 and 24, Applicant argues that the

data source for an external table is not a remote database management system and

does not contain database objects (the Applicant seems to be referring to the location

specifier is a file). Respectfully, the portion cited by the Applicant does not state that the

external table is not a database management system, in fact it states that the access

driver interprets the information in the context of the external data which may be

accessed in most any way depending upon the driver. In fact a driver could easily

interface with an external database just as easily as a flat file. With respect to

arguments regarding claim 13, the arguments regarding claims 3-5 apply to this claim

as well. It is therefore respectfully submitted that the Oracle reference does teach these

limitations.

With respect to arguments regarding claim 14 and 51, Applicant argues the

destination aspect of the limitation however the claim states "source or destination" and

it is therefore only required that one element or the other be taught. It is clear from the

answer to arguments regarding claim 12, above, that the Oracle reference sufficiently

teaches this claim. Regarding claim 15, the arguments regarding claim 1 can be applied

to the Applicant's arguments.

With respect to arguments regarding claims 16-22 and 60-61, Applicant argues

that the table contained in Rivlin does not contain rows representing objects belonging

to the set of objects. It is respectfully submitted that the Oracle reference discloses

objects (SQL Reference page 2-107) and the Rivlin reference discloses objects

contained in a table (file table, column 7, lines 25-30) and that these objects represent a

set (the set of files copied in bulk copy operation, column 7, lines 48-55). Respectfully, the claims are disclosed by the combination of references.

With respect to arguments regarding claim 23, Applicant argues that the section regarding logfiles in <u>Oracle</u> (SQL Reference, page 13-28), it is respectfully submitted that the citation is referencing the control file expansion to add a file automatically in the MAXDATAFILES Clause is in fact the intended citation. Therefore <u>Oracle</u> teaches the claim.

With respect to the arguments regarding claim 25, it is not clear from the claim language how dumpfiles are even involved in the claimed subject matter and it is respectfully submitted that the Applicant is reading limitations from his specification into the claim language. It is noted that datafiles are taught by the <u>Oracle</u> reference (page 9-29) and therefore the claim is disclosed by the reference.

With respect to arguments regarding claims 26-35, Applicant argues that SQL*PLUS does not disclose the claimed interface whereby an entity that uses the transfer mechanism may interact with the job. Respectfully, the SQL*Plus tool can be used to interact with Stored Procedures which have been shown to be the transfer mechanism and job as shown in claim 1. The remaining claims are disclosed by the relevant argument answers to claims above, and therefore <u>Oracle</u> discloses these claims.

With respect to arguments regarding claims 44,45,47,49,56 and 57, Applicant

argues that <u>Rivlin</u> does not disclose attachment to or detachment from a job.

Respectfully, <u>Rivlin</u> discloses job status and detailed status of the job. Combined with

<u>Oracle</u>'s SQL*PLUS as shown in the explanation of claims 26-35 above, the attachment

or detachment via reading or modification of the job's control object (Stored Procedure)

is possible. Therefore the claims are disclosed by the combination of references.

With respect to arguments regarding claim 46, Applicant argues that the cited

parallelism does not disclose specifying a degree of parallelism with which the objects

may be transferred. It is respectfully submitted that the cited reference in fact shows that

the parallelism of the database object in the system means that more Stored

Procedures are able to operate in parallel and allows the degree of parallelism for

transferred objects to be controlled since these Stored Procedures work directly with

external applications. Having more of these Procedures operating in parallel means that

the degree of parallelism can be specified for the objects transferred. It is therefore

submitted that <u>Oracle</u> does teach the claim.

With respect to arguments regarding claims 36-38 and 63, Applicant argues that

the further limitations besides those in claims 1 and 43 which are not taught are the set

of files and the queryable control object is contained in the set of files and specifies the

locations of database objects. <u>Oracle</u> discloses that "which are functions or procedures

written in PL/SQL and stored in the database, or written in a language like C or Java

and stored externally" (SQL Reference, page 2-38), which shows that the control

database object can be stored externally as in claim 36 and is therefore taught by the

Oracle reference in combination with Basko.

With respect to claim 37, Applicant argues that Rivlin does not teach metadata

which defines a type of objects and the order determines that the metadata is

processed before the database objects. It is respectfully submitted that the first

processing step in Rivlin is to construct the file attribute table (column 3, lines 10-12),

where the file attributes table is the metadata in the instant application, and the attribute

table then can contain rows which represent the objects which are files (column 3, lines

26-30), which cannot be processed until the attributes in the attribute table are

constructed. It is therefore respectfully submitted that Oracle in view of Rivlin teaches

the claim.

With respect to claim 38, Applicant argues that the claim is not taught by Oracle's

relevant documentation. However, it is respectfully submitted that the crosschecks of

backups and copies do in fact teach the claim. In the Oracle Recovery Manager User's

Guide, the media catalog is checked for the existence of a specific piece of information

and the location of such data. It is therefore noted that Oracle does teach the claim.

Conclusion:

The references cited disclose the claimed system and methods for performing

jobs that transfer objects into and out of a database. In light of the forgoing arguments,

the examiner respectfully requests the honorable Board of Appeals and Interferences to

sustain the rejection.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the

Related Appeals and Interferences section of this examiner's answer.

Respectfully submitted,

/Jay Morrison/

Jay Morrison, Assistant Examiner, AU 2168

November 25, 2007

Conferees:

Tim Vo, SPE AU 2168

Hosain Alam, SPE AU 2166

TIM VO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER